

Selected Readings in **COMPUTING AND TELECOMMUNICATIONS**

Editors
Mira Kartiwi
Teddy Surya Gunawan
Aisha Hassan Abdalla Hashim



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TABLE OF CONTENT

PREFACE	X
1. MANUSCRIPT PROCESSES MONITORING SYSTEM FOR RESEARCH MANAGEMENT CENTER	
Aznan Zuhid bin Saidin, Mira Kartiwi and Husam bin Latih @ Abdullatif ..	1
2. IIUM STUDENTS FORUM SYSTEM	
Mira Kartiwi and Waleed Mohamed Ibrahim	9
3. SABA DECORATION FACTORY (SDF) SYSTEM	
Mira Kartiwi and Abdulaziz Omar	17
4. TAKAFUL AGENCY WEB PORTAL	
Mira Kartiwi and Mohd. Hafiz Zairin bin Ayop	27
5. HUMAN CAPITAL BUSINESS PARTNER INFORMATION TECHNOLOGY & NETWORK TECHNOLOGY MAN POWER MODEL	
Akram M. Z. Khedher and Siti Sarah binti Abdul Halim	39
6. DEVELOPMENT OF ENERGY ASSESSMENT TOOLS FOR SINGLE PHASE APPLIANCES	
Musse Mohamud Ahmed and Siti Nor Amiza bt Massere	52
7. FINGERPRINT AUTHENTICATION SYSTEM USING MATLAB	
Teddy Surya Gunawan and Mohd. Hanis bin Jenalis	66
8. PERFORMANCE EVALUATION OF LOSSLESS SPEECH AND AUDIO COMPRESSION ALGORITHMS	

9. DESIGN AND IMPLEMENTATION OF VOICE SECURITY SYSTEM IN MATLAB AND JAVA	
Teddy Surya Gunawan and Siti Ruqayah bt. Mohd Akahsah.....	91
10. DESIGN AND DEVELOPMENT OF RFID SECURITY MODEL	
Ahmed Wathik Naji and Fatema-Tuz-Zohra.....	112
11. RADIO PROPAGATION MEASUREMENT AND CHANNEL MODELLING FOR WIRELESS BODY AREA NETWORK	
Mimi Aminah bt. Wan Nordin and Norsyaidatul Fairuz bt. Fauziz	125
12. FEATURE EXTRACTION FOR AUTOMATIC FETUS AGE ESTIMATION FOR ULTRASOUND IMAGES USING ELLIPSE MODEL	
Teddy Surya Gunawan and Norakmal Abdullah.....	143
13. NOISE REDUCTION USING KALMAN FILTER	
Teddy Surya Gunawan and Ismail Haji Hassan Dualeh.....	168
14. PARALLEL ALGORITHMS FOR EDGE DETECTION ON CLUSTER COMPUTER	
Teddy Surya Gunawan and Elkabir Ansoya Bacar.....	189
15. PREDICTION OF PROBABILITY OF BIT ERROR RATE IN DIGITAL COMMUNICATION SYSTEM	
Saad Osman Bashir, Abdallah Mohammed Tawfeeq Zyoud and Besir Salah Eldin Mahmoud Sid Ahmed	209
16. COMPARATIVE ANALYSIS OF LOW POWER VLSI CIRCUITS TECHNIQUES	
Anis Nurashikin Nordin and Fatin Alea bt. Talib	219

17. SPHERICAL POV LED DISPLAY USING PIC 16F628	
Teddy Surya Gunawan and Muhammad bin Ahmad	235
18. IMPLEMENTATION OF CAPACITANCE OF VOLTAGE CONVERTER FOR CAPACITIVE TRANSDUCERS	
A.H.M. Zahirul Alam and Nur Fadhila bt. Che Halim	255
19. PROTEIN CODING IDENTIFICATION OF HUMAN DNA SEQUENCE USING WAVELET	
Teddy Surya Gunawan and Norashikin Abdul Wahab	274
20. OPTIMIZATION OF ZAKAT MANAGEMENT SYSTEM IN INDONESIA USING GEOGRAPHIC INFORMATION SYSTEM (GIS)	
Muharman Lubis	292
21. IIUM CAR STICKER RECOGNITION USING PHASE BASED TEMPLATE MATCHING ALGORITHM	
Teddy Surya Gunawan and Siti Aisyah bt. Mohamad	308

21. IIUM CAR STICKER RECOGNITION USING PHASE BASED TEMPLATE MATCHING ALGORITHM

Teddy Surya Gunawan and Siti Aisyah bt. Mohamad

ABSTRACT

This project is about how to recognize IIUM car sticker by using Matlab. This project consists of two parts; one dealing with the image localization processing and the other one are to integrate the recognition system. Among the challenges of the first part of the project is to capture, store and process the image under a controlled environment. The process of this project started with the image acquisition by capturing the car sticker image and adjusts the size of the image. Then, image enhancement process is done to highlight certain features of interest in an image. After that, Morphological-processing step is done to filters out the useless information in the image. Finally, the object is recognized in the object recognition step by using template-matching method. In this report, experimental results for the methods are presented. Both parts of the project are computer based and it will use Matlab as the main software.

21.1 INTRODUCTION

Security awareness has made the need for vehicle based authentication technologies extremely significant. Hence, the car sticker recognition system may be employed as access control system for monitoring has unauthorized vehicles entering private or secure areas like IIUM. Typically the applications of car sticker imaging are used for secure-access control type applications. Without secure access control, IIUM will suffer from parking lot management due to insufficient and limited parking lot spaces